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March 15, 2012

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California Energy Commission  
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Subject: Data Response, Set 1B-5  
Hidden Hills Solar Electric Generating System (11-AFC-2)

Dear Mr. Monasmith:

On behalf of Hidden Hills Solar I, LLC; and Hidden Hills Solar II, LLC, please find attached electronic copies of Data Response, Set 1B-5:

Hard copies will be sent out today. Please call me if you have any questions.

Sincerely,

CH2M HILL

A handwritten signature in blue ink, reading "John L. Carrier".

John L. Carrier, J.D.  
Program Manager

Encl.

c: POS List  
Project file

**DOCKET**

**11-AFC-2**

DATE MAR 15 2012

RECD. MAR 15 2012

**Data Response 1B-5**

# **Hidden Hills**

## **Solar Electric Generating System**

(11-AFC-2)



**Application for Certification**  
**Hidden Hills Solar I, LLC; and Hidden Hills Solar II, LLC**

**March 15, 2012**

With Technical Assistance from



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# **Hidden Hills Solar Electric Generating System (HHSEGS)**

**(11-AFC-2)**

**Data Response, Set 1B-5  
(Response to Data Request 54)**

Submitted to the  
**California Energy Commission**

Submitted by  
**Hidden Hills Solar I, LLC; and  
Hidden Hills Solar II, LLC**

March 15, 2012

With Assistance from  
**CH2MHILL**  
2485 Natomas Park Drive  
Suite 600  
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# Introduction

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Attached is Hidden Hills Solar I, LLC, and Hidden Hills Solar II, LLC (collectively, “Applicant”) additional response to the California Energy Commission (CEC) Staff’s data request number 54 for the Hidden Hills Solar Electric Generating System (HHSEGS) Project (11-AFC-2). The CEC Staff served these data requests on November 4, 2011.

# Biological Resources (54)

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## EFFECTS OF POWER TOWERS ON AVIAN SPECIES

**BACKGROUND:** The potential for large solar thermal projects to impact avian species protected under the Migratory Bird Treaty Act is a concern to the resource agencies. The USFWS Regional Migratory Bird Program staff has indicated there is concern about the effects of large power tower projects to birds, bats, and eagles due to the potential for direct take from the super-heated air surrounding the tower and indirect take due to loss of foraging habitat. The USFWS Region 8 has issued interim guidelines<sup>1</sup> on the development of Avian and Bat Protection Plans and indicate "...of concern are the cumulative effects of renewable energy projects in initiating or contributing to the decline of some bird and bat populations, as well as other affected species..."

The applicant performed fixed avian point count surveys utilizing three, east-west trending transects through the project site from March 23rd to April 14th 2011. In Data Adequacy Supplement A, the applicant indicated that the potential for effects to migrating birds is expected to be small (section 6 page 12) since birds typically migrate at night at an altitude above the ground structures. Appendix 5.2H, Avian Point Count Survey Report, identified a few species that are likely migrant birds moving through the project area, including LeConte's thrasher and dusky flycatcher. The AFC and supplements do not discuss the occurrence of migratory bird corridors, wintering bird stopover sites, or Important Bird Areas in the project area. Supplement A (page 12) states that "bird strikes are expected to be rare due to the absence of migratory pathways, ridge tops, and concentrations of waterfowl" although provides no reference for such findings. Staff needs additional information on migratory bird species presence in the project area and habitat use of the project site in order to establish an adequate environmental baseline and to determine the project's potential for impacts to migratory birds.

## DATA REQUEST

54. Please provide staff information on the occurrence of Important Bird Areas, migratory bird flyways, and large open-water nesting or migratory stopover sites in the project area. Please consult with local or regional bird experts including the local Audubon group, and/or Point Reyes Bird Observatory staff on available passerine point count data for breeding birds or migrant bird species that occur in the project area and provide that data, if available.

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<sup>1</sup> USFWS, Region 8, Interim Guidelines for the Development of a Project-specific Avian and Bat Protection Plan for Solar Energy Plants and Related Transmission Facilities (USFWS Region 8 September 2010).

**Response:** Spring avian point count surveys were performed in May, 2011 and the results were included in AFC Appendix 5.2H. Winter avian point count surveys were performed between December 20, 2011 and January 11, 2012. The results of the point count survey are provided in this data response. The purpose of the bird counts is to determine the bird use and diversity within the Hidden Hills Project Site during the winter.

### **Methods**

Avian point count surveys were conducted using BLM Solar Facility Point Count Protocol (BLM, 2009). The protocol requires the following:

1. One point count transect per square mile
2. Eight point count locations per transect
3. Point counts must be 250 meters apart
4. One day a week for four consecutive weeks between March and April (breeding)
5. One day a week for four consecutive weeks between November and January (wintering)
6. Each point count will be 10 minutes long with a 100 meter radius
7. Concentrate on areas where there will be birds (washes, high vegetation areas, etc.)
8. Point counts will be conducted from sunrise to four hours after sunrise, with an extension to 11:00 if temperatures are not too warm.

CH2M HILL biologists completed 4 rounds of avian point count surveys at 39 survey points on the HHSEGS project site near Calvada Springs in Inyo County, California between December 20, 2011 and January 11, 2012. The point counts were located on the same transect lines used in the spring survey (Figure 1). Point counts were generally conducted between 0715 and 1030 hours with local sunrise during this period occurring between 0645 and 0715 hours. A biologist began at one end of each transect and surveyed each point sequentially to the midpoint while the other biologist drove the vehicle to the transect midpoint and surveyed each point moving toward the opposite end of the transect. This created a long period of silence after the vehicle was stopped, which maximized the opportunity for bird activity to return to pre-disturbance levels.

### **Site Description**

Two natural vegetation types occur at the HHSEGS site: Mojave Desert scrub and shadscale scrub. These are common plant community types throughout the Mojave Desert. It is crossed by a few intermittent washes, and sitting in a wide valley framed by mountains. Elevation on the site ranges from approximately 2,585 to 2,685 feet while peaks over 6,000 feet stand within 10-miles to the west, and peaks over 10,000 feet stand within 25 miles to the northeast.

### **Results**

The presence/absence data include two types of counts. The first type of presence/absence data is the number of species observed at point count stations, which were spaced evenly over the site and timed to have the same length of observation period. During these timed periods, the biologists were actively looking for every bird to enter the 800-meter radius. The second type of count (incidental observations) is the total number of bird observations recorded at any time while the biologists were onsite. This includes incidental observations that were made while they were engaged in other activities, e.g., walking between observation points or driving.

During the winter point count surveys, 795 individual bird observations of 15 species were recorded. An additional 746 individual observations and 11 additional species were recorded as incidental observations outside of the point count circles, in transit between the point count locations and flying over the site. An overall total of 1,541 observations of 26 species were recorded (Table 1).

No avian species listed as threatened or endangered under the federal Endangered Species Act (ESA) or the California Endangered Species Act (CESA) were observed. Sightings of three avian species designated as a "Species of Special Concern"<sup>2</sup> ("CSC") by the California Department of Fish and Game (CDFG) were recorded during the point count surveys. They were northern harrier (CSC), golden eagle (CSC, and BLM sensitive species), and loggerhead shrike (CSC). These species were detected in both seasons and may be resident to the site. However, they are present in low numbers and comprise a very small portion of the total observations (less than 3 percent of observations, combined). An incidental observation of a burrowing owl (CSC) along Tecopa Road in Nevada was also recorded.

TABLE 1  
Birds Observed During Avian Surveys Conducted During Winter 2011/2012, at the HHSEGS Project Site.

Common Name <sup>a</sup>	Scientific Name	Total Point Count <sup>b</sup>	Incidental Observations <sup>d</sup>	Total Observed
Gambel's quail	<i>Calipepla gambelii</i>	0	1	1
<b>Northern Harrier</b>	<i>Circus cyaneus</i>	2	11	13
<b>Golden Eagle</b>	<i>Aquila chrysaetos</i>	0	4	4
Red-tailed Hawk	<i>Buteo jamaicensis</i>	0	9	9
Ferruginous Hawk	<i>Buteo regalis</i>	0	3	3
Prairie Falcon	<i>Falco mexicanus</i>	3	6	9
American Kestrel	<i>Falco sparverius</i>	3	2	5
Rock Dove	<i>Columba livia</i>	7	2	9
Eurasian Collared-Dove	<i>Streptopelia decaocto</i>	3	16	19
Mourning dove	<i>Zenaida macroura</i>	0	1	1
Greater Roadrunner	<i>Geococcyx californianus</i>	1	0	1
Barn Owl	<i>Tyto alba</i>	0	1	1
<b>Burrowing owl</b>	<i>Athene cunicularia</i>	0	1	1
Northern Flicker	<i>Colaptes auratus</i>	0	1	1
<b>Loggerhead Shrike</b>	<i>Lanius ludovicianus</i>	3	5	8
Common Raven	<i>Corvus corax</i>	0	40	40
Horned Lark	<i>Eremophila alpestris</i>	207	258	465
Bewick's Wren	<i>Thryomanes bewickii</i>	1	0	1
LeConte's Thrasher	<i>Toxostoma lecontei</i>	3	1	4
European Starling	<i>Sturna vulgaris</i>	0	1	1
Phainopepla	<i>Phainopepla nitens</i>	0	1	1
Sage Sparrow	<i>Amphispiza belli</i>	386	49	435
Savannah Sparrow	<i>Passerculus sandwichensis</i>	7	0	7

<sup>2</sup> The term "Species of Special Concern" is an administrative designation used by CDFG, and carries no formal legal status. <http://www.dfg.ca.gov/wildlife/nongame/ssc/index.html>



**TABLE 1**  
Birds Observed During Avian Surveys Conducted During Winter 2011/2012, at the HHSEGS Project Site.

<b>Common Name<sup>a</sup></b>	<b>Scientific Name</b>	<b>Total Point Count<sup>b</sup></b>	<b>Incidental Observations<sup>d</sup></b>	<b>Total Observed</b>
White-crowned Sparrow	<i>Zonotrichia leucophrys</i>	5	0	5
Western Meadowlark	<i>Sturnella neglecta</i>	2	1	3
House Finch	<i>Carpodacus mexicanus</i>	162	332	494
Totals		795	746	1,541
Species Counts		15	22	26
Unique Species		4	11	15
Species in Common				11

Notes:

<sup>a</sup> Common names in bold are CDFG and/or BLM sensitive species

<sup>b</sup> Birds observed during point counts in point count circles

<sup>c</sup> Birds observed during eagle use surveys, including non-eagle species.

<sup>d</sup> Birds observed eagle point counts and incidental sightings

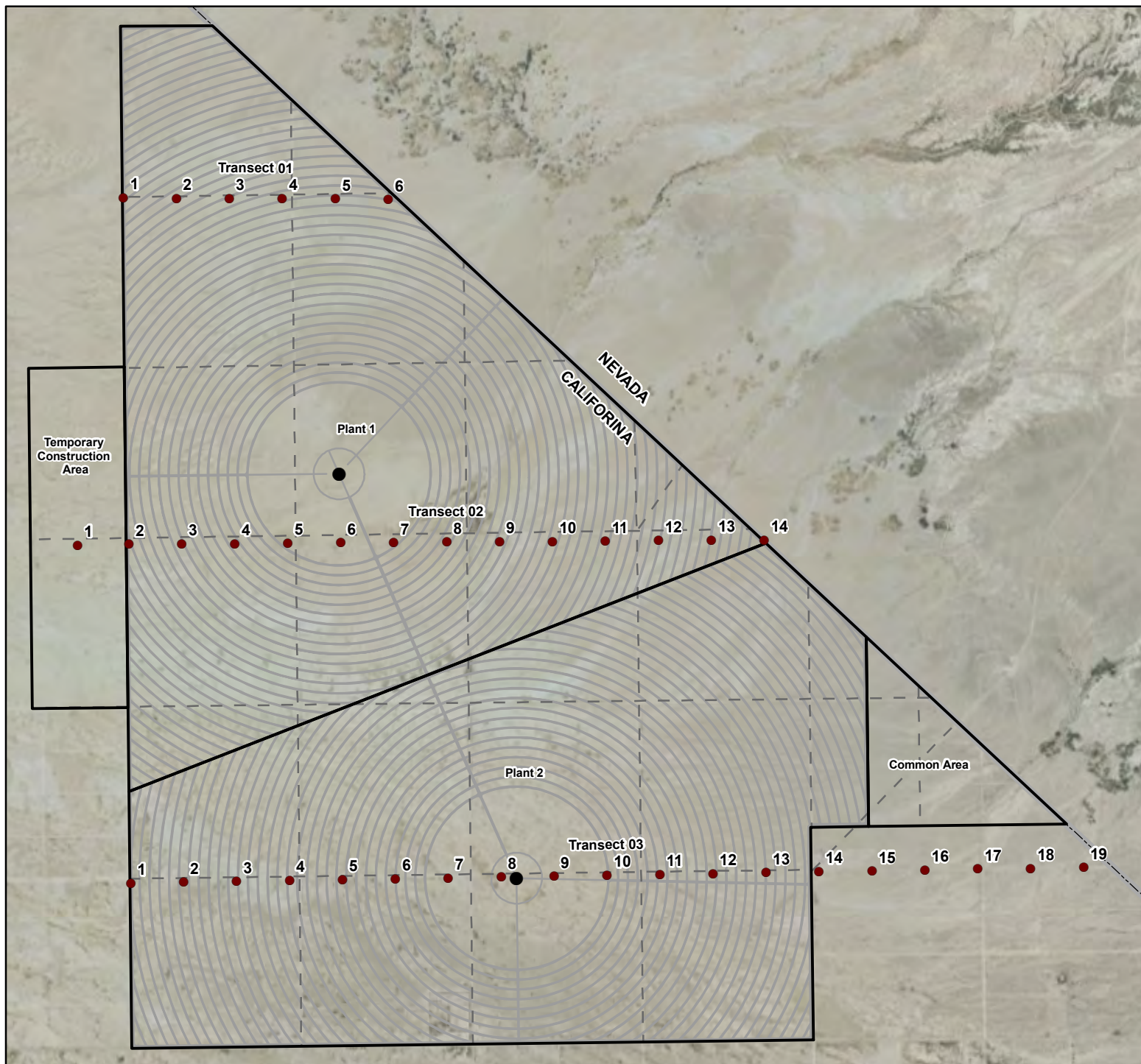
The number of bird observations and the number of species seen on each observation day are presented by transect in Table 2. The final column totals the number of observations and species recorded. The total species observations number accounts for multiple observations of the same species but the number of birds observed includes repeated observations of the same individual birds.

**TABLE 2**  
Point Count Observation Results From Four Rounds of Avian Surveys Conducted During Winter 2011/2012.

	<b>December 20/21</b>	<b>December 28/29</b>	<b>January 4/5</b>	<b>January 10/11</b>	<b>Winter Total</b>
<b>Transect 1 (6 Pts)</b>					
# Birds Observations	9	29	7	9	54
# Species Observed	2	3	2	2	5
<b>Transect 2 (14 pts)</b>					
# Birds Observations	113	106	34	81	334
# Species Observed	3	3	4	3	4
<b>Transect 3 (19 pts)</b>					
# Birds Observations	128	59	107	113	407
# Species Observed	9	6	9	4	15
<b>Total Observations</b>					795
<b>Total Species</b>					15

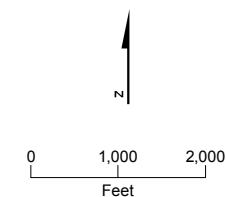
## References

Bureau of Land Management (BLM). 2009. Solar Facility Point Count Protocol.



#### LEGEND

- Avian Point Count Locations (250 meters)
- Solar Towers
- - Site Road
- Solar Field Heliostat Lines
- Project Boundary



**Figure 1**  
**Avian Transects and Point Counts**  
 Hidden Hills Solar Energy Generating System



**BEFORE THE ENERGY RESOURCES CONSERVATION AND  
DEVELOPMENT COMMISSION OF THE STATE OF CALIFORNIA**  
1516 NINTH STREET, SACRAMENTO, CA 95814  
1-800-822-6228 – [WWW.ENERGY.CA.GOV](http://WWW.ENERGY.CA.GOV)

**APPLICATION FOR CERTIFICATION  
FOR THE *HIDDEN HILLS SOLAR ELECTRIC  
GENERATING SYSTEM***

DOCKET NO. 11-AFC-2  
PROOF OF SERVICE  
(Revised 3/9/2012)

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### DECLARATION OF SERVICE

I, Mary Finn, declare that on March 15, 2012, I served and filed copies of the attached Hidden Hills SEGS, Data Response, Set 1B-5, dated March 15, 2012. This document is accompanied by the most recent Proof of Service list, located on the web page for this project at: [\[www.energy.ca.gov/sitingcases/hiddenhills/index.html\]](http://www.energy.ca.gov/sitingcases/hiddenhills/index.html).

The document has been sent to the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit or Chief Counsel, as appropriate, in the following manner:

**(Check all that Apply)**

**For service to all other parties:**

Served electronically to all e-mail addresses on the Proof of Service list;

x

— Served by delivering on this date, either personally, or for mailing with the U.S. Postal Service with first-class postage thereon fully prepaid, to the name and address of the person served, for mailing that same day in the ordinary course of business; that the envelope was sealed and placed for collection and mailing on that date to those addresses **NOT** marked "e-mail preferred."

**AND**

**For filing with the Docket Unit at the Energy Commission:**

by sending an electronic copy to the e-mail address below (preferred method); **OR**

x

— by depositing an original and 12 paper copies in the mail with the U.S. Postal Service with first class postage thereon fully prepaid, as follows:

**CALIFORNIA ENERGY COMMISSION – DOCKET UNIT**

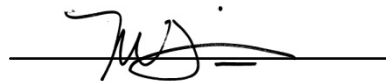
Attn: Docket No. 11-AFC-2 1516 Ninth  
Street, MS-4 Sacramento, CA 95814-5512  
[docket@energy.state.ca.us](mailto:docket@energy.state.ca.us)

***OR, if filing a Petition for Reconsideration of Decision or Order pursuant to Title 20, § 1720:***

— Served by delivering on this date one electronic copy by e-mail, and an original paper copy to the Chief Counsel at the following address, either personally, or for mailing with the U.S. Postal Service with first class postage thereon fully prepaid:

California Energy Commission Michael J.  
Levy, Chief Counsel 1516 Ninth Street MS-  
14  
Sacramento, CA 95814  
[mlevy@energy.state.ca.us](mailto:mlevy@energy.state.ca.us)

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, that I am employed in the county where this mailing occurred, and that I am over the age of 18 years and not a party to the proceeding.

  
Mary Finn  
CH2M Hill